

**Craighead Environmental Research Institute**  
**Monthly Progress Report: August, 2008**  
for the Montana Department of Transportation and Western  
Transportation Institute

Bozeman Pass Wildlife Monitoring  
MSU banner number 426899

**1 August 2008 – 31 August 2008**

**Task 1: Road Kill Surveys during August 2008**

Road kill surveys were conducted between Bozeman and Jackson Creek. Surveys were conducted on both sides of I-90 from Bozeman to Jackson Creek and back for a total of 22 miles round trip and an estimated 1 hour of labor per survey. Fourteen (14) road-kill surveys were driven during August of 2008. Two (2) of those recorded no new road-kill. This equals 308 miles driven in August for this subcontract. Totals of animals killed between Bozeman and Livingston were:

<b>Bozeman Pass Roadkill Totals</b>	<b>August</b>	<b>Number</b>
Species		
Badger	0	
Beaver	0	
Bobcat	0	
Bird Spp.	2	
Black Bear	0	
Cowbird	0	
Coyote	0	
Crow	0	
Deer species	0	
Dog	0	
Domestic cat	0	
Elk	0	
Great Horned Owl	0	
Ground Squirrel	0	
Harrier	0	
Hungarian (Gray) Partridge	0	
Long-eared Owl	0	
Magpie	2	
Mallard	0	

Marmot	1
Meadowlark	0
Mink	0
Moose	0
Mule Deer	1
Pigeon	0
Porcupine	0
Rabbit	0
Raven	1
Raccoon	6
Red Fox	0
Ruffed Grouse	0
Snowshoe Hare	0
Skunk	9
Small mammal spp.	0
Weasel	0
White Tail Deer	3

### **Task 2: Track bed monitoring at the MRL Bridge in August 2008**

Two track beds session were completed in August. The majority of large animal tracks were deer. The area in the center of the track bed which was improved with a drainage pipe in July has prevented erosion of the track bed during several large rainstorms. Track bed use (and underpass crossings) seemed to have increased greatly in late August. Crossings per day during the first session were 0, 8, 4, and 5. Crossings per day during the second session were 33, 16, 18, and 19.

### **Task 3: Photo monitoring at fence ends through August 2008**

Cameras were downloaded twice in August. Batteries for these fence-end remote cameras were operational. On August 22 we installed new color RECONYX cameras next to the older monochrome cameras at the fence ends. Animal occurrences photographed at the fence ends in August were: SE fence end - 2 rabbits, 1 skunk, several mice and several grasshoppers. One deer travelled from inside the fence out along the guardrail at the SE fence end. At the NE fence end: 1 pigeon, 1 deer, one least weasel, and several grasshoppers and mice. The camera mounted under the bridge over Bear Canyon road was not checked in August. The newer RECONYX cameras appear to be slightly less sensitive than the older models (fewer grasshoppers recorded) but sensitive enough for this task. The skunk that passed the SE fence end walked in front of both cameras but was apparently just under the sensor beam of the newer camera so that it was not recorded.

### **Task 4: Photo monitoring at jump-outs through August 2008**

We removed the Trailmaster motion sensors during the middle part of June. We deployed new RECONYX cameras on August 22 at the NE and NW jump-outs. At that

time we used a weed whacker to trim the brush at the fence ends and jump-outs. Prior to cutting we were getting a large amount of false camera triggers due to the motion of the vegetation. After cutting the number of false triggers was greatly reduced. We recorded several birds at the NE jump-out in late August. No animals were photographed at the NW jump-out since August 22. Cameras will be deployed at the SE jump-out in early September (only marmot tracks have been recorded there to date) and at the SW jump-out (no tracks to date). The SW jump-out will be problematical as it is located on a narrow bank about 15 feet wide between the Interstate and the frontage road. We will try setting the sensitivity extremely low so that vehicles do not trigger the camera.

#### **Task 5: Track bed monitoring at fence ends, jump-outs through August 2008**

Monitoring of fence ends and jump-outs continued through August with no records of animals exiting through the jump-outs. This was supported by camera data since August 22.

#### **Task 6: Photo monitoring of culverts August 2008**

Due to the high run-off in Rocky Creek one culvert camera was downloaded in July and the second in early August. The camera in the east culvert took photos of 4 raccoons. High water and debris have created a blockage across the east culvert that may impede travel by animals somewhat. We will clear a path in September since this is the culvert that usually has very low water levels and seems to be much preferred by animals. The camera in the west culvert took photos of birds (water ouzels) during the winter. At the end of August the water was still roughly 2 feet deep and probably discourages use by most animals.

#### **Task 7: Opportunistic snow tracking at track bed, fence ends, jump-outs, and along the Interstate in August 2008.**

We are no longer conducting snow tracking at the track bed, fence ends and jump-outs until winter.

#### **Task 8: Data Management & Reporting in August 2008**

Data entry and summary required two hours during August.

#### **Discussion:**

Although the older RECONYX cameras seem to be slightly more sensitive to movement and seem to respond more quickly when triggered these slight differences are not significant for our operations. We will leave the parallel cameras at the fence ends to further judge their performance until winter.

An invoice was submitted with this report for August expenses and activities. Currently the cumulative total billed to this project is \$23,590.44.